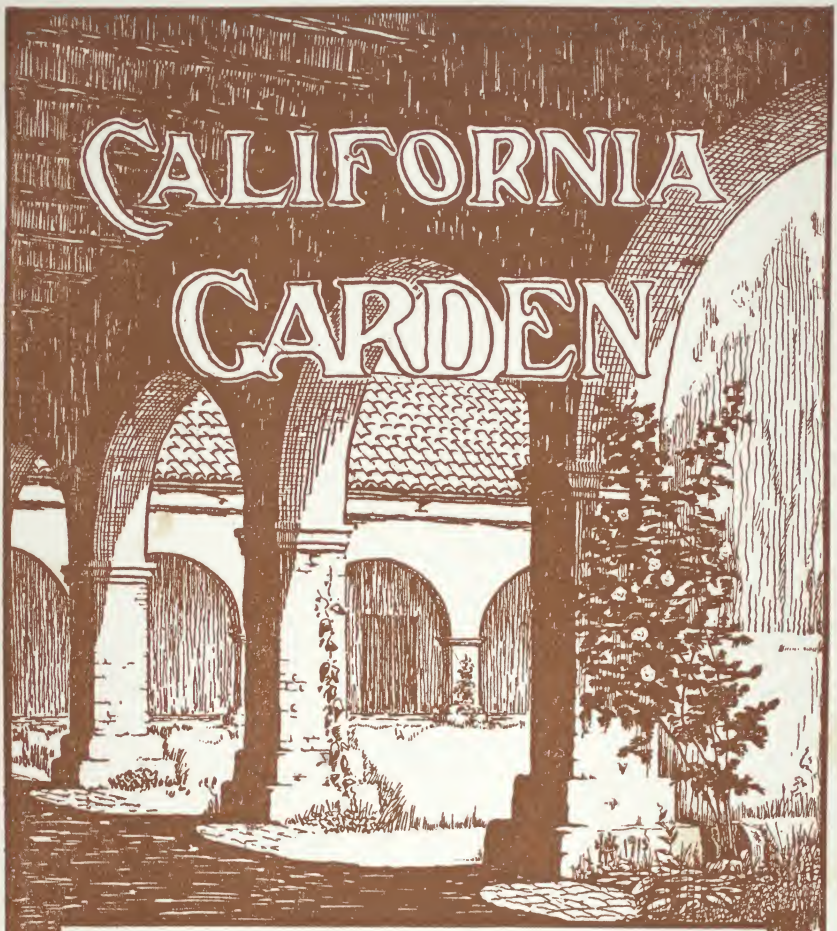
CALIFORNIA GARDEN



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JANUARY, 1927 TEN CENTS

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SAN DIEGO COAST PLANTING

By K. O. Sessions.

San Diego's long coast line is one of its greatest assets and each year more homes and summer cottages are built in close proximity to the shore. There is always a gentle but steady breeze, and every plant that thrives in this climate will not flourish close to the sea—for besides the breeze, there is a saltiness in the air that seriously affects some plants. Nature, however, provides against such conditions and by selecting seashore and island plants from different parts of the world, we can here grow many sorts, with a charming result.

Locally the Rhus integrifolia (or Lemonade berry shrub), Atroplex Brewerii (commonly called grey salt bush), Cineraria Maritima (the winter blooming Sea Dahlia) and our California Poppy—Eschscholtzia, are all desirable for the shore line.

The Ceanothus verucosus (white winter blooming wild lilac), flourishes a very short distance from the shore on high bluffs. Its fine habit of symmetrical growth and early blossoms make it a very charming plant for every garden in San Diego—as well as the sea shore locations.

From the Australian seashores we have that fine plant Coprosma Bauerii, which is now more conspicuous in San Diego than in any other city in the state. There are some varieties of it that should be more in cultivation Stockii and Variegata.

Pittosporums Crassifolia and tobira are very dependable; the Myoporums are exceptionally hardy; Raphiolepis ovata or Japonica should receive greater attention in every garden—it is so reliable and makes such a fine matted ground cover that lasts and never gets too high or scrubby looking. Its more choice varieties—Raphiolepis delcourii and Indica are very charming and but little known in San Diego at present.

The Tamarix is a seashore plant and hardy, and all varieties except the Athol are deciduous and so are not quite so desirable. The Athol becomes almost a tree in 2 or 3 years—it is only just becoming well known here. It should be conspicuous at all the beach resorts for shade and hedges.

Berberis Wilsonii, a charming evergreen low growing shrub, is wonderful in foliage and fruit in the fall in Northern California and Oregon—but in San Diego it is in good foliage and berry only in a north situation and exposed to the cool sea breezes (as far as I have observed). Its low and compact form make it a valuable addition for such locations.

Erica Mediterranea is growing more successfully at La Jolla than in the San Diego Mesa gardens.

Aloes in many varieties are extremely hardy for the exposed shore locations and the poorer soils. They are winter bloomers and very attractive. No staking, pruning or spraying is ever necessary.

All the statice varieties both perennials and annuals are natives of the sea shores—mostly near the Mediterraneau Sea; but our own sandy and marshy shores supports one variety as seen at Del Mar and Coronado.

There are very brilliant native annuals and perennials to be grown from seed that are worthy of more culture.

Observe the plants on the sand dunes of Mission Beach and the Coronado Strand that are each year growing less because of the inroads of scrapers and houses and sidewalks.

Good ground covers—rather than grass, are varieties of the mesembryanthemums also English Ivy is worthy of a very extensive use and a wild strawberry from the shores of San Francisco is a success for it has good evergreen foliage but no fruit.

The Creeping Junipers in variety must claim more attention for they flourish in poor soil and without the use of fertilizers. There are some six sorts that have been well tested here—Juniperus chinensis procumbens, J. Sabina, J. Virginiana Var tripartita, J. Communis compacta, J. Pfitzeriana, etc. The Junipers need to be set back from the shore a short distance, and next to buildings is fine for them.

Leptospermum laevigatum and Acacia latifolia are a great success—also the Hakea suaveolens, like a minature pine, so brilliantly green and regular in growth.

Arbutus unedo (the Strawberry tree) succeeds well on an exposed side and Lagunaria Pattersonii is a remarkable tree (a tall shrub for a long time) in growing perfectly straight in the wind. Our own California tree—the Monterey Cypress, thrives near the

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coast but is bent by the wind. Some artistic examples are very noticeable on Coronado's ocean boulevard. The tallest and most striking tree is the Araucaria excelsa—a native of Norfolk Island, 1000 miles east of Australia and Tasmania. It holds its color and perfect form and erectness in a wonderful way. The entire La Jolla coast line would become famous if this tree was planted along the shore at irregular intervals of 150 to 250 feet.

At La Jolla the trees near the Bishop School make a charming group against the sky.

Of the exotic pines—Pinus Halepensis is one of the best for coast plantings but not directly at the shore line. Our Pinus Torreyana we know is a real land mark for the hillsides facing the sea. The Catalina Cherry does well if not too close to the water.

Few vines flourish close to the sea—but Hall's Honeysuckle and Tecoma capensis (a shrubby grower but with brilliant scarlet blossoms) are satisfactory. The dense growing maidenhair vines need the protection of a building at the back.

Most of the Acacias will do well a short distance from the sea shore, especially with some protection, also several of the Eucalyptus—the Sugar Gum and Cornuta Lehmanii in particular. Rubber trees also succeed at a short distance form the shore.

Mr. T. W. Vaughan at the Biological Station, La Jolla, is experimenting with and testing out many varieties of plants that are recommended for such locations and in the near future the results will be very valuable for nurserymen and garden builders. The whole of San Diego County offers a very fine field for horticultural development, for our county extends through so many altitudes and varying climates—from the sea to the foothills to the mountains and to the desert.

THE NEXT MEETING

The regular January meeting will be held in the Floral Building in Balboa Park on the evening of the eighteenth at seven-thirty. The subect under discussion will be Plant Pests and Their Control. Mr. McLean, County Horticultural Commissioner and Editor of the California Garden, has been invited to give the principal address, and it is expected that other authorities will talk on their experiences in ridding their gardens of the various bugs and things that add the spice of variety to the gardening problems of even the most successful flower growers. It is hoped that members and friends will seize this opportunity to learn to recognize and fight their ever-industrious foes.

The program committee had hoped to offer the members an opportunity to visit some of the fine gardens of Coronado on the first Tuesday afternoon in February. As several are now in the process of reconstruction, this trip has been postponed to a future date—and no other arrangement has yet been made. Announcements will appear in the newspapers of the 5th, 6th and 7th of February. Kindly watch for them.

MRS. EVANS' PAPER

Of special interest at the December meeting of the Association, was a very instructive and pleasing paper on the origin of Christmas caroling, read by Mrs. Herbert Evans. She brought to our minds the beautiful Noel spirit expressed in European music, painting and floral art and made a plea for a like expression of the people of the newer world. Especially would she have us continue the lovely custom of candle lighting on Christmas Eve and urged us to light tapers in memory of several members of the Association who have passed on during the year.

ENCINITAS FLOWER SHOW

Mr. Thos. McLoughlin has sent a very special invitation to members of the San Diego Floral Association and their friends to attend the Encinitas Flower Show, to be held at South Coast Park, on the State Highway just above Encinitas, January 21st, 22nd and 23rd. Some very beautiful flowers will be on exhibition at this time. Admission is free.

PLANTING OF DECIDUOUS TREES AND SHRUBS IN SOUTHERN CALIFORNIA

By Jno. G. Morley.

For several years past a change in garden, street and park planting has taken place by the use of many varieties of deciduous trees and shrubs. These lend a sharp contrast to the former type of practically all evergreens, both in flowering shrubs and trees and also the extensive use of conifers.

This change, no doubt, has come because of the great influx of new residents from the Eastern states; also from the fact that many of the landscape designers and gardeners are from the East.

In a recent trip of several days to cities in Southern California, I could not help but observe the changes that are taking place. In many instances this type of planting, when well designed, has produced many charming effects. It tends to introduce variety and accentuates the seasons of the year, in spring when the beautiful new foliage appears; in summer when fully developed; autumn when the coloring of the leaves gives us the first glimpse of approaching winter and then the winter season, when the trees and shrubs are denuded of their foliage, brings to mind the days when we lived in a climate of frost and snow; and although we do not actually have the snow to contend with in Southern California. we are reminded of it when we view the Sierra Madre mountains which are frequently covered with a mantle of white during our rainy or winter season.

Like many others, I love the deciduous trees and have been an advocate of their planting to a reasonable extent in Southern California for the past thirty-five years. Of course, in the old days, I have been severely criticised and naturally by natives of the State and the old-timers. They would say, "We don't want trees that are bare in winter,—we can see plenty of them back East; we want evergreens, palms and exotics, so that the people from the East will think this is a climate of Eternal summer." And this reminds me of my trip to Europe two years ago, when motoring through the midland counties of England, where everything was so beautiful and green,—it was green, green everywhere,—and the beauty of it appalled me, so that I said to my brother and sister who were showing me the sights, "For Goodness sake, can't you drive me somewhere where it looks like a desert or some change in the scenery from the beautiful vendure on every hand?" Of course this was in summer time, when everything was at its best and which, in a short time, would be replaced with the autumn and winter seasons.

(To be continued)

DOUBLE LIFE OF PLANORBIS CORNEUS

By R. R. McLean.

Nearly all California Garden readers are familiar with snails of one sort or another, particularly those that destroy our gardens. Until the discovery at La Jolla some years ago by State and County horticultural men of a bran and calcium arsenate mixture as a satisfactorty poison for these herbivorous mollusks, we had to rely altogether on hand picking to protect our choicest plants from total destruction. The discovery of a poison combination that would be taken readily by snails has changed the entire situation and by poisoning at the proper time we can now insure almost complete freedom from injury to plants.

The purpose of this article is, however, to point out the strange relationship existing between certain snails and a parasitic enemy of sheep. A number of months ago one of the quarantine inspectors working under the direction of the writer intercepted and held for examination a shipment of snails coming by express from San Francisco to a prominent seeds dealer in San Diego. The snails in question were intended to be colonized in lily and fish ponds for the purpose of ridding the water of algae or moss. Being of an inquiring turn of mind and remembering our experience with European snails at La Jolla, the inspector took specimens of the intercepted snails to Mrs. Kate Stephens of the Natural History Museum in Balboa Park. Mrs. Stephens very promptly and kindly identified them as Planorbis corneus, an introduced old world species. With this identification we were able to determine that Planorbis corneus in addition to being a scavenger with a particular appetite for algae, is the alternate host of liver-fluke of sheep.

Both animals and plants suffer from diseases and animal parasites which pass through strange transformations either inside or outside the bodies of affected hosts. Some of them are not able to infect or infest other plants or animals directly, but must first go through intermediate stages in other hosts or be introduced by them.

The white pine blister rust with its necessary intermediate stages on currants and gooseberries is a familiar example, as is also black stem-rust of wheat, with barberies as the intermediate host or carrier. The deadly spotted fever of human beings is transmitted by the bite of a tick, the germ passing from generation to generation through its eggs. Yellow fever, carried by certain mosquitoes, and typhus fever, carried by lice, are also well-known illustrations.

The sheep fluke is a minute, flattened, leaf-like parasite of sheep, occurring largely in the liver, although they may make their appearance elsewhere. Eggs laid by adult flukes finally pass through the bodies of in-

(Continued on page 4)

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FOLIAGE AND FLOWERING BANANAS

By Harry Johnson.

To many of us the growing of bananas for the ornamental value of the flowers may come as a surprise. As a matter of fact many of them bear striking inflorescences and here and there in the tropics and in botanic gardens they are greatly prized. In our own gardens we grow three species and a variety or so purely for the pictorial value of their splendid foliage and general tropical effect. Much of this exotic effect is due to the fact that they are gigantic herbs and not true trees and thus are quite different in aspect to any of our common plants.

I have not so far run across the common commercial banana in any of our plant collections, though quite likely it has been grown here. In the American tropics the variety of Musa sapientum called "Gros Michel" is grown almost exclusively for export to the United States and Europe. One often thinks how fine they must be in the tropics when picked fresh, but as a matter of fact they are just as well flavored when purchased in our markets as any I have tasted in the plantations of the United Fruit Co.

The commonest variety seen in the our gardens is a variety of M. sapientum and is extremely common in the American tropics where the three-angled fruits are usually eaten green by the natives. It is called "Giñeo", though this term is perhaps more generic than varietal in application. The ripe fruits are coarse and poorly flavored. The Chinese banana (M. Cavendish), has been grown here, but I do not at present know of any plants. It is much dwarfer than the giñeo. At one time commercial plantations were started in California.

Musa Ensete, the Abyssinian Banana, is the most stately and beautiful species we have. It belongs to the division of the genus distinguished by the bottle-shaped stem and lack of suckers. There are many more species in this section, some of them of equal merit to M. Ensete, a few of these being catalogued in Europe. They are mostly native to Africa and among them are some deciduous species. The deciduous habit is probably developed as a response to a well marked dry period rather than to cold.

The flowering bananas with brilliantly colored bracts belong to a third section of the genus—Rhodoclamys, which means literally red-bracted. To this belongs the pretty pink flowered species, M. rosacea, now becoming disseminated. It was introduced by E. D. Sturtevant many years ago coming from Fairmount Park in Philadelphia. Prior to 1913 I had procured a sucker from him and grew it under glass. The outdoor plants were killed by the heavy freeze of that year, the surviving sucker then being planted out in the conservatories at Lincoln Park, where it has since given a good account of itself. In general appearance it is a miniature of the common banana, but seldom exceeds five feet in height. The leaves differ somewhat in being more strongly reflexed from the midrib and in being held a little more upright. The growth is neat and pleasing. The flowers of Musa originate at the apex of the true stem which is the underground part or rhizome. The false stem of what is generally called the trunk is formed entirely of the inrolled petioles and up this the flower stalk thrusts to emerge at the top and unfurl. The conspicuous part of the inflorescence is the brightly colored bracts of spathes which cover each group or hand of flower.s These bracts fill a two-fold purpose; first to protect the floral organs from rains and secondarily to attract insect visitors. In the case of M. rosacea they are bright pink shaded with lavender and quite conspicuous. As the spike elongates downward new bracts expand lengthening the blooming period. The flowers are orange-yellow. I have not seen the fruit, it probably being sterile here. The plants ar fairly hardy, at least as much so as the common species and when frosted spring up again with the coming warm weather.

M. Uranoscopos (M. coccinea of the trade) with brilliant red bracts has been tried before and now is apparently established. It is perhaps the most striking cultivated species.

M. aurantiaca, whose bracts are bright orange-red, should prove a splendid aquisition when brought into cultivation. There are a number of other desirable species of this type most of whom are found wild in the rainforests of India and Southern China.

PLANORBIS CORNEUS

(Contiuned from page 3)

fested sheep and if the eggs fall into suitable water, such as in stagnant ponds or pools, will develop into embryos. The embryos enter the bodies of snails found in such places and pass through one or more transformations therein. After a suitable time the new forms leave the snails and either swim about in the water or attach themselves to blades of grass. From here they are taken up by sheep with water or the grass and the life cycle begins once more. Such is the strange part played by Planorbis corneus, ordinarily only a algae scavenger, in this serious disease of sheep. Without snails in which to pass through necessary transformations sheep-fluke would die out.

The instances of symbiotic relationships known to exist between various species of plants, or of animals, or between plants and animals, and in which a continuance of the relationship is a vital necessity to the completion of the life cycle of the plants or animals affected are many in number , and a knowledge of them is of the utmost importance in determining methods of control or eradication in the case of plant disease or insect or other animal infestation.

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The Jan. and Feb. Gardens

JANUARY GARDEN

By Mary Matthews.

A Happy New Year to all gardeners and their gardens, but we will all have to work hard to make this come true. A good bit of time can be very profitably spent this month in our leisure moments by reading some of the very instructive nature and gardening books. One of the best and most widely known gardeners in the country says that long ago he resolved that not a day should pass without his giving at least one hour to the reading of some gardening work from which he might profit.

The 1927 catalogues that are coming to us are a valuable fund of information and when from a reliable source can be depended upon.

Buy your seeds early, "First come first served." Among the old favorites include those you have tried out for several seasons and know to be well suited to your locality. Have your ground in good condition before you transplant the little seedlings you have. If the soil is still wet, better to hold them over, for if put into wet ground that does not work up well, you are apt to lose the most of them.

As soon as your soil is fit you can put in both annuals and perennials for flowers. All through the summer both seeds and plants can go in—for the commoner quickly growing things seeds are all right, but for the more special subjects if you have not raised them yourself it is better to buy the small plants; in either case seeds or plants take precaution to protect them from slugs and snails, which are very active at this time. Alum in powder or in liquid form is highly praised as a preventive and is not injurious to the plants. Bran mixed with Paris Green is good to get rid of cut worms.

Another planting of Gladiolus should be put in this month. When you come to make a selection the number of varieties is most confusing and when you have seen them in bloom you will find that many are much alike, when you decide what colors you want go to your reliable bulb dealer and get him to help you in making a choice and remember that many of the older and cheaper ones are just as good in the garden plan as some of the newer ones that are high priced just because they are new.

All spring blooming bulbs will be coming on rapidly now, keep free from weeds and if

(Continued on page 11)

THE GARDEN

By Walter Birch.

Now that the holidays are over we can go back to the garden again with renewed zest.

In order to make the most of the rains that have already fallen or that will fall between now and the end of Spring, always remember to cultivate carefully after each rain before the ground begins to get hard. This is particularly important with heavy soils, because otherwise they become so packed together that it is impossible for sun and air to penetrate. At this time of year, particularly, the penetration of sun and air, to warm up and air-ate the soil, is most important for the satisfactory growth of your plants, particularly for the ones you have recently planted and the ones you will shortly plant.

A good strain of pansies make a wonderful show of blooms and, if you set out strong plants now, in a week or two you will have blooms, and if cared for they will keep on blooming for three or four months. Calendula, Bachelor Buttons and Dimorpotheca are three other good spring bloomers.

Cinerarias, good strong plants, if taken intact out of pots can also be set out, also plants of Columbine, Snapdragon, Fox Glove and Stocks. The Majus type of Snapdragon produces wonderful flowers, both in size and range of color; be sure to try some of them.

January is one of the best months to plant gladioli bulbs, and good glads, like good dahlias are so numerous that it is hard to know where to start. However, barring a few of the top notchers of these bulbs, one need only make a very modest outlay to have a nice show of beautiful gladioli, as one can usually get a good mixture for 75c per dozen, and named varieties from $1.00 to $1.50 per dozen. The latter figure always contains a lot of good ones, but if you want something special of course you will have to pay more.

Remember that gladioli blooms always face the sun. They will grow in any good garden soil, but, of course, like most other plants, they will respond in quality and size to good treatment. The most satisfactory way to plant them for best effect, is in goups of ten to a dozen bulbs, plant bulbs from four to six inches deep (four inches in heavy soil, six inches in light) and far enough back in the bed or borders to have lower growing plants in front of them. They are easy to raise and will fully repay for any attention they may receive.

Auratum, Rubrum and Tigrinum Lily bulbs are now eady for planting.

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The California Garden

Editor
R. R. McLean
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EDITORIAL

Now that Christmas has come and gone one may speculate safely once more concerning the effects of Christmas tree customs on our future timber supply. Probably we will still have to have our Christmas trees, no matter how the timber prospects of the future may be affected, for a custom is to a people what a habit is to an individual, something not always readily changed or broken.

It has been estimated by someone with a mathematical bent that some 10,000,000 Christmas trees, worth at least $5,000,000, were used in America this past season. Can 10,000,000 young trees be cut annually for this festival without sooner or later crippling our timber resources? Particularly so when it is considered that nearly all the trees used are of the pine family, our most valuable wood. At first thought it certainly does seem that, laying sentiment aside, here is an economic waste we can ill afford.

Fortunately, however, for the peace of mind of our children, as well as that of some of us older ones, silviculture authorities assure us that we can still have our Christmas trees without seriously draining our forest resources. In fact all authorities agree that proper thinning of the forest stand is advisable and that judicious cutting of small trees under proper regulation is beneficial to the stand as a whole rather than otherwise. Prof. Metcalf of the U. of C. School of Forestry suggests that where possible living Christmas trees be used. He does not approve of the movement to prohibit, by law, the cutting of Christmas trees, and adds, "Foresters and others who have been working for years for a comprehensive program of forest conservation realize that the success of the movement for forest protection depends very largely on the development of a very widespread appreciation of the forest in the minds of the American people."

"There is probably no better way of instilling a love for trees in the hearts of the rising generation than the use of the little evergreen as the central figure of the Christmas festival."

There is a local aspect to the Christmas tree problem which should not, in the writer's opinion, be overlooked. Most of our trees at Christmas time come by steamer from Oregon and Washington. This is as it should be, as thinning of the great forests in the north is in line with the best forest practice. But not all of our trees come from the heavily timbered northern forests. During the week immediately preceding Christmas the writer met literally dozens of automobiles coming in from the mountains with some sort of a tree in the back seat, on the running board, or draped over the spare tire. In spite of the warnings of the owners of private timber lands and of government officials in charge of forest reserves, many otherwise law abiding persons secured their trees this past season by right of conquest. With no reference to the ethics, or lack of ethics, of this method of obtaining Christmas trees, it should be said that San Diego County cannot well spare her forest trees of the pine family for this purpose. Except where land on which trees are growing is wanted for agricultural or commercial uses. all of our forest trees, large and small, should be religiously preserved. The writer earnestly hopes that by another year some concerted and energetic action will be taken to head off Christmas tree vandalism.

The City of Denver has an ordinance requiring all Christmas tree venders to pay a $50.00 license fee. It further requires that all trees sold must be cut under the supervision of the city or the U. S. Forest Service. If cut on private land the exact location and ownership of the land must be shown. Not a bad idea.

Christmas Tree Articles—The Editor commends the two articles immediately following to the attention of California Garden readers. They are published in this issue in order that those who wish to grow their own Christmas trees may take advantage of the present planting season.

FOR THE CHRISTMAS SPIRIT

Out of door illumination for the Christmas season is growing every year in use and popularity.

In the Eastern States the custom of decorating a living tree with brilliant electric lights has been observed for many years.

It was the writer's privilege to spend the Christmas holidays last year in the suburban, residential section of a large city in Michigan. The houses were far apart and, from the wide lawns one could see in every direction. Looking from the windows on that snowy Christmas eve one could count more than a dozen small living, growing fir trees, sparkling with many colored lights, shining objects in a stormy atmosphere. Perhaps some passer by, himself homeless and friendless, had his heart warmed by the glow. Perhaps to some it brought a new significance to the Christmas tide.

In our own fair city many windows are brightened by candles and gaily decorated Christmas trees. The Community Tree in Balboa Park has been a source of much pleasure to all who have seen it.

With the revival of the Christmas caroling, which has been so enthusiastically taken up in San Diego, may we not hope that the time will soon come when every lawn will have a living, growing Christmas tree that, in the midst of all our exchange of gifts and the joys of the blessed Yuletide, will remind us of the great gift to the world in the birth of the Holy Christ Child nearly two thousand years ago.

M. B. W.

LIVING CHRISTMAS TREES

Suitable evergreen trees to grow on a small lawn that would make suitable Christmas trees might be any one of the following:

Podocarpus elongatus, a new and choice variety; Callitris robusta; Hakea suaveolens; Melaleuca genistifolia, Libocedrus decurrens; Arizona cypress (Cupressus arizonica), and some of the small, erect growing Junipers.

For large lawns or back yards or where there is ample space for trees with a spread of 20 to 30 feet when 10 and 20 years old, the following are recommended:

Libocedrus decurrens; Cedrus deodara, if soil is deep and well drained and not adobe; Cedrus atlantica glauca, no adobe soil; Pinus canariensis, deep but poor soil will do; Montezuma cypress; Norfolk Isdand Pine, the Araucaria excelsa; Monterey cypress.

All these trees, both the large and small growers, are more beautiful when never trimmed, the lower branches resting on the ground and there is no lawn beneath them. The wonderful vigor and beauty of that fine avenue of Cedrus deodars at Altadena above Pasadena, which are now lighted yearly with thousands of electric lights from Christmas Eve until New Year's night, is an attraction that we could duplicate in many rural sections here, such as at La Mesa, Grossmont, Chula Vista, Coronado, and Pacific Beach on some avenue where 30 feet on each side of the roadway could be given up to the growing of fine evergreen trees and no sidewalk or cement improvements would ever be laid down, excepting a substantial curb. Our native Libocedrus decurrens in 20 years would make a very fine showing and being a native tree it will be very hardy and never require a stake or any pruning.

K. O. S.

THE NATIVE SYCAMORE
Platanus Racemosa

This probably is quite the most beautiful of California's native deciduous trees, but seems little spoken of and seldom used in and around San Diego. Up Los Angeles way it is thought a lot of and is being largely planted.

Mr. Theo. Payne has urged, I believe with good effect, it being planted along the wide Los Feliz Boulevard (The Happy Way) past his nursery, which, if wishes materialize, is to become a fine Spanish street.

These Sycamores (do not confuse with S. occidentalis or orientalis) are quick growing and easy to raise if you are not in too much of a hurry. Never try to move them either as seedlings or rooted cuttings till they become dormant in early winter and you are safe. Try to do it in spring or summer and you'll lose all or nearly all for a certainty.

If you raise them from seed sow it in the spring in any good soil, in the ground, perferably under a lath house, plants will be a foot high or more by the autumn and when dormant can be set in pemanent places or in cans.

Cuttings root easily in sandy soil. kept quite moist as soon as calloused, fairly moist until then, in a frame or bed under a lath or in some sheltered spot.

For cuttings choose the strong young sucker growths found around the tree base and cut to several eyes, plunging them quite two eyes deep in sandy soil. January is perhaps the best month.

However magnificently they root and grow don't persuade yourself into moving them until they shed their leaves the following winter, therefore it is best to give each cutting plenty of room. Platanus racemosa may be distinguished from other varieties by the tiny frill left on the stem from the leaf bud cover. When the leaf in spring unfolds this is often pushed on to the stem, dries and usually stays on all the year.

Native Sycamores are found in the valleys along old river bottoms mostly, so one should not think to grow them on hillsides.

GRACE ROBINSON, La Jolla.

ARRANGEMENT AND CULTIVATION OF SUCCULENT PLANTS

By M. C. Shaw.

To the person with a very limited amount of time and space for a garden, a collection of Cacti and Succulents is a most interesting and easily cared for possession.

These plants are especially suitable for this country, with its long periods of heat and drought, and present a very great variety in color and form, beside producing gorgeous flowers and attractive fruits. They bloom at different seasons, some by night and others by day, and many of the flowers are sweetly scented.

In manner of growth the Cacti and Succulents are also quite diversified. Many are upright growers, some are decumbent, while others trail along the ground. Altogether these plants afford the greatest variety.

Thirty-five or fifty sorts make a very good beginning, and these should be planted in a sunny, sheltered location, and they prefer a sandy or gravelly soil for good drainage.

Place the tallest growers, like most of the Cereus, Sempervivums and Opuntias in the center of the plot grouping the lower ones, such as Echinocactus and Sedums around them, and completing the edges with Mesembryanthemums, dwarf mammillarias and Staphyleas.

All of these require almost no care except an occasional spraying with the hose to keep them free from dust and to give a small amount of moisture.

To one who has a plot of this sort the "little desert" is always the most curious and fascinating spot of the garden.

FUNGUS GARDENS

In many parts of the world ants are major pests among insects. In California they are chiefly troublesome by reason of the protection they give to certain insect pests of plants and by the annoyance they cause in and around gardens and houses. Argentine ants, in addition, cause direct losses in many ways, including reduction in value of properties infested.

In the tropics certain species of ants defoliate trees, citrus trees among others, and carry the leaves to their nests for the development of food for the colony. These large ants, of the species Atta, live on fungi cultivated on a bed of leaves. The leaves are cut from the trees by the stout mandibles of the workers and are carried to specially excavated chambers. Here they are built up on the floors of the chambers, according to Dr. Wheeler of Harvard, into sponge-like masses, over the surface of which a delicate white fungus rapidly develops. This fungus, which is constantly weeded by the smallest ants in the colony, is prevented from fruiting and constrained to produce peculiar clusters of small, glistening food-bodies called "ambrosia."

"Some of the small Atti instead of building their fungus gardens on the floors, suspend them from the ceiling of the chambers so that the masses of sub-stratum clothed with fungus filaments hang down like white velvet curtains. None of the Atti or their larvae, so far as known, can eat anything except the particular kind of fungus which they cultivate. To appreciate the advantages to which these completely vegetarian ants have attained in thus substituting an easily controllable and abundant food supply for the scarce and precarious diet of their predatory ancestors, one must observe these wonderful ants in Brazil or Central America moving their long trails in interminable processions, defoliating whole trees and carrying their leafy burdens like banners to their huge nest-craters, which often spread over a quarter of an acre or more.'

R. R. McLEAN.

REDWOOD TREE PRODUCES FIVE MILLION SEEDS

"Squirrels are certainly helping out the reforestation program in Humboldt County this year,' says Professor Woodbridge Metcalf, who has just received a letter telling of cone collecting from Forester Corbitt of the Pacific Lumber Company.

In general the crop of cones is rather light this year but one tree adjacent to the Redwod Highway has yielded approximately 300 pounds of cones. All of these cones were cut from the giant tree by squirrels and picked up from the ground at about weekly intervals by Corbitt or one of his cone collectors before the squirrels had time to hide them away.

The cones average a little over an inch in length and half an inch in width and when subjected to warm, dry air in a kiln for 24 hours each cone releases about 130 tiny seeds. It takes approximately 100,000 of these red-brown grains to make a pound, and from this tree six pounds of cones produces one pound of seeds. A little simple mathematics applied to these figures shows that this single tree produced the enormous total of five million seeds this year.

"Not all of these seeds would grow," says Professor Metcalf, "but previous study of redwood seeds indicates that given average nursery care and making allowance for death of seedlings from many causes, the progeny of this tree may easily number 250,000, or enough to plant up 500 acres of cut-over redwood land. The squirrels that cut these cones may go hungry this winter, but think how happy their descendants wil be in 20 or 25 years when the millions of trees now being planted commence to bear cones."

Patronize the Garden Advertisers.

SAN DIEGO WEATHER DURING JANUARY

By Dean Blake.

January, without question, is the coldest month in San Diego and its environs. Low temperatures are more frequent and the daily mean temperature is lower than at any other time of the year. The station record minimum of 25 degrees was established in January, 1913. Severe frosts becoming serious freezes back from the coast occur most often at this time.

It is also the rainiest month, and the liability of wet weather is greatest. Hardly a January has passed without a rainy spell of several days' duration, usually accompanied by winds of considerable force. The highest velocity on record in the city, 54 miles from the south, occurred in this month in 1916.

In spite of its being the midwinter month, the percentage of sunshine is large and many clear, bright days of moderate temperature are experienced.

From the records at the Weather Bureau we find that the normal mean temperature is 54 degrees; the mean maximum 62 degrees and the mean minimum 46 degrees. The average rainfall over a large period of years is 1.88 inches, the greatest having occurred in 1916, when 7.56 inches was recorded, and the least having occured in 1850 and 1859 which were rainless. The humidity is low, averaging 71%.

HOW TO CUT ROSES

A part from feeding and other attentions which go to help in the production of a second crop of flowers, attention to the proper cutting of the stems has a considerable bearing on the achievement of that object. It would almost appear that there are few who ever give the matter any serious consideration, judging by the fact that no mention is made of it in writing, or yet in actual practice. In the actual practice of cutting Roses, ladies often show great carelessness in that respect. If the stem of the Rose is a long one, it is often cut midway between the bud and the old wood, leaving a long spur with many eyes (buds) which will, in all probability, bear an equal number of weakly shoots that may never develop Rose buds.

On the other hand, if the stem is a short one it is usually cut hard back to the old wood, not leaving one bud, (or eye) even, to allow of the forming of a young shoot. Both methods are wrong, and can only be termed as extreme forms of mutilation of the bushes.

The Correct Way to Cut Your Roses

To produce one or two vigorous shoots that may flower in late summer or autumn, the Rose stem should be cut back, leaving about two eyes (or buds), and perhaps four, if the stem is a strong one. If the stem is a short one, not more than two buds should be left. Cutting the stems back and leaving the number of eyes according to the strength of stems I have mentioned may at first appear to be rather troublesome. By constant practice and attention to this important detail one soon acquires proficiency, so that the cutting to the correct number of buds becomes almost automatic. In spring, when the pruning of the bushes is undertaken, the benefit of this system of cutting the Rose stems will be obvious in better regulated bushes, in stronger wood and a considerable saving in pruning as well.

W. GRANT.

OUR HERITAGE OF TREES

Under the above title J. J. McLeod, senior forester of New South Wales, Australia, bewails the loss of the former magnificent forests of eucalyptus in h's province. These words will as aptly fit conditions in California and all other states in this country.

"One hundred and thirty years ago New South Wales was a well-timbered country, possessing huge areas of virgin forests, which if available at present prices would pay our national debt many times over. The story of the early history and development of forestry and tree culture in this state is not an attractive one; on the whole it is a sad story of destruction and spoilation. * * * Our forests are a gift of nature for man's use and benefit, and by conservative management can be made to serve the needs of both the present and future generations. Conservation as a policy means wise use and systematic replenishment, and the lesson of history is that forest preservation and national prosperity go hand in hand."

INTERESTING PLANTS

The Office of Foreign Seed and Plant Introduction U. S. Department of Agriculture, is constantly testing out thousands of new plants in its acclimatization gardens and sending them to all parts of the United States for trial. Some of the plants are ornamental only, others have a food value. Some have strange histories and backgrounds of adventure and romance. One such plant that has been associated with considerable mystery and romance is the Yerba Mate or Paraguay Tea, now growing on government grounds at Bell, Md. It is said that many previous attempts have been made to secure seeds or plants of Yerba Mate, but all have failed until now. The following reference is made to it by the Department: "Originally used by the natives in the making of a ceremonial and invigorating drink it was early adopted by the Portuguese and Spaniards, and very

(Continued on page 16)

TREES

By Alice Mary Greer.

(Editor's Note—The old Brandagee place was recently subdivided and many of its fine old trees cut down.)

"O hail, thou friendly breeze from yon blue Pacific," saluted Eucalyptus ficifolia as he reared his stately head in the Southern California sun and looked up at his lovely sister, Eucalyptus citriodora.

"Rejoice and give thanks," joined in citriodora and she gracefully swayed beside him. "For do we not daily render thanks that for two score years and more we have been able to receive the winds from the Pacific that washes our shores and to stand sentinels of these our canyon sides?"

"Two score years? That is not long, oh my sister."

"Aye, not long. Thou speakest truly," answered Pistachio nut tree. "I was half grown when thou wert a mere babe watched over by the man and his wife who didst love us and all our kinsfolk here, who did bring me from the far distant land of Persia and tenderly nurtured me for the enjoyment of all men. Yea, they brought me and all these our fine palm companions and our noble yew tree that hast withstood the storms and the strife these many years. When thou wert a mere stripling those children yonder used to be happy at their play beside us but dost thou think that they hurt or did injury to any of us? Never. They loved us too much for that and now their own children love and protect us because their parents taught them reverence."

Ficifolia's rosy cheeks grew rosier in the warm sunlight. He played hide and seek with the bumble-bees clustering about his blossoms as he said, "How we miss the dear man of the place! Bougainvillea not long since heard a lady tarrying near her say that the man of the place was now lying somewhere under the trees that he loved so much, with the stars for a canopy over his head. And Bougainvillea whispered it to me."

All the trees within hearing drooped their heads and wept silently, especially citriodora who is ever loving and sympathetic. Even to this day she is drooping and sorrowing.

"Hold up thy heads. Weep no more but be glad," said the tallest palm for miles around. "Find comfort in something further that the kind lady said. 'But these trees and shrubs, these vines and flowers, will ever be a living monument to the planters. They have offered enjoyment to hundreds. Scientist will ever visit them to study the rare specimen. Man and the winged birds throughout future generations will find comfort therein.' Thus spake the woman."

And all were at peace.

Not many moons afterwards the trees hung their branches together and listened. Strange voices and strange faces were under them.

"Yes,' remarked one voice, "we have bought this place for our home. It was these trees that sold it to us. They shall be saved for they are indeed priceless."

"Listen, oh my companions, all listen," sang the trees and they sent their messengers, the hundreds of birdlings dwelling in their shade, to spread the news.

Yet another day two men stood a short distance away, for these were indeed the days when strange voices and strange measuring rods seemed busy in the midst of treeland.

"Yis sur, think I kin get 'em all cleared in four days. Give you and the missus enuf firewood to warm yer marrow fer two winters."

Again the birdlings flew hither and thither but this time sadly and slowly for their hearts were sorely heavy. Citriodora drooped a little longer and wondered. All her neighbors wondered and sighed. It was hard now to stand erect and to be glad in the breezes from the blue Pacific as had been their wont for two score years and more. The next day more measuring rods right through the heart of treeland and a man with shining axes. Birdlings flew hither and thither.

"Ye are safe here," they twittered, "but our companions over there will live only a short time more, brave spirits.'

Then it was that all the trees put their heads together and joined in a mighty paean of thankfulness that they had been given an opportunity to make the earth a little lovelier for their presence, the air a little purer for their growth, the world a little sweeter that they had lived.

The axman's blade was sharp; the axman's muscle was strong; the axman's eye was hard. Soon a long field was stripped of its covering. Bare and bleak in the glaring sunlight shone a stretch of ashes and broken twigs. The hearts of the remaining trees in treeland were sore and lonely but they were not alone in their grief for many human hearts who saw beauty in trees were also sore and lonely.

The axman's sharp blade rang on and while it was ringing thousands were sitting breathless in the auditorium of the same southern city held by the voice of the great diva Schumann-Heink. And their souls found peace as she sang Joyce Killmer's Trees.

"I think that I shall never see
A poem lovely as a tree.

A tree whose hungry mouth is prest
Against the earths sweet flowing breast.

A tree that looks at God all day
And lifts her leafy arms to pray;

A tree that may in summer wear
A nest of robins in her hair.

Upon whose bosom snow has lain;
Who intimately lives with rain.

Poems were made by fools like me
But only God can make a tree."

COCOS NUCIFERA

The coconut palm loves a tropical sun and salt water. It seems to be a much loved tree by picture makers, for you can hardly find any kind of picture from tropical shores or islands without a coconut palm. Now to the simple housewife's untutored eyes the tree is not beautiful. It looks like an immense, moulting feather-duster, on a long pole, languidly trying to sweep the cobwebs out of the sky. It is too tall for its girth; with trunk circumference of three feet it often grows seventy-five and more feet high. It lacks dignity and decision, veers and bows at the beck of every vagrant breeze. A grove of them suggests long legged sheiks teetering home from a spree, for they lean against each other in all directions in a really maudlin manner. Yet, as by their fruits you must judge. this tree is evidently a joker who dons a frivolous air to hide his real worth. It produces the largest known nut of commercial value. The liquid in a fresh, ripe nut is so delectable you want to name it the "milk of human kindness". The various uses of tree and fruit are more than I have room to tell. The nut in varied shape wanders up stairs, down stairs, and in my lady's chamber. It can help the old man say his prayers by greasing his knees, or, if he stay stubborn, will ease subsequent bru'ses with liniment. As a lubricant, an emollient, a food, a confection, a cosmetic, the coalheaver, the cook, the candyman and my lady bid it welcome. Its entire absence would leave an aching void full of friction, frowsy hair, and chapped hands. (That last sentence sounds Irish: of course a void can be full of noth'ng but noth-ing.)

Next time anyone calls you a "nut' say, Yes, I'm a cocoanut, and one of its pests is a lobsterlike crab.

GRAY GOOSE.

JANUARY GARDEN

(Continued from page 5)

at all dry give water. A sprinkling overhead tends to lengthen stems which is desirable as many are apt to be short stemmed. Most lilies are to be had now and the bulbs should go in. Aganpanthus can be separated and the old clumps should be given some stimulant.

PLANTS AS INSECTICIDES

Insect attack is responsible for the severe injury or death of many plants in our gardens and orchards. Although materials used for the destruction of insects are perhaps largely mineral or chemical, it is nevertheless true that a relatively large number of plants have important insecticidal properties and when prepared and used properly, help to balance the score against insects. Some of these plants furnish actual poisons, others are irritants and still others are repellants.

An investigation made by the United States Department of Agriculture indicates that some 54 species of plants have an insecticidal value and are in common use against some 28 species of insects. Common tobacco and some 3 species of chrysanthemums head the list in point of actual effectivenss. Tobacco is used as a powder or as a liquid extract against many forms of insect life, particularly such soft-bodied insects as plant lice, thrips, leaf-hoppers, mealy bugs, etc. Probbaly more tobacco is used as an insecticide than all other plant poisons combined. Chrysanthemum flower heads and leaves, dried, are ground into the well known Pyrethrum, Dalmation, Persian and Caucasion insect powders, all of which have considerable value. Two other plants were found to have a deadly effect upon certain insects, one of them being a woody shrub from Peru or Ecuador called "cube'. The roots contain a very poisonous milky sap. In addition to furnishing an insect poison the roots are sometimes unlawfully used to poison fish in streams. The second poisonous plant referred to, "derris", is East Indian in origin and is also used as a fish poison as well as an insect poison.

A native grass in South Africa possesses such a disagreeable odor that certain insects will not go near it. The English government is said to be testing it with a view of trying its repellent properties against the tsetse flies whose bites produce the fatal "sleeping sickness" in that country. An orange grower in South Africa reported that a plot of this grass protected oranges growing within 300 feet of it from the sting of fruit flies.

R. R. McLEAN.

INDIAN CHIEF WARNS AGAINST FOREST FIRES

Written in the language of the Algonquins, the following notice by Chief Tenascon might be seen in northern Quebec last season:

"My dear children and well beloved: I beg of you this season, you who are always in the woods, if you see a fire to put it out if possible, and if you cannot put it out yourselves, notify at once the forest rangers. Do not smoke while traveling through the forest. You know yourselves what else you should do. (Signed) Louis Tenascon."—(American Forests).

LATH HOUSE MATTERS

By Alfred D. Robinson.

The Rosecroft lath house has had a surprising number of visitors for the time of year and the majority have been locals convoying strangers to see the Begonias that were in bloom in the summer. I have spent a lot of effort, sadly needed in other directions, to explain that the large flowering tuberous Begonias are in bloom in the summer only, but it has been a waste of strength for after I have said, "Lady, those big blooming plants you saw and adored in July are a variety that is seasonal, they shed their tops in the winter and are now stored as dry bulbs like narcissus", the general result is for that lady to turn to her flock and say, "It is too bad they are all dead, you should just have seen them when I was last here."

I have often referred to the Winter-blooming tuberous for some time cultivated in England, being hybrids of Socotrana, which have proved entirely unsatisfactory with us, but this year I grew from imported seed, Froebelli, which Bailey describes as a native of Ecuador and a winter bloomer, and although my seed was planted too late for a real trial, a few small plants are blooming now, and they have made me very enthusiastic in my hope for it for next year. The habit is low, the foliage attractive, and the single blooms a delightful red lasting for weeks. Just when it will go dormant nomally I don't know, but most of the tops have already come off leaving characteristic tubers.

While on this tuberous matter I want to make a note or two about that old old kind, Evansiana. Only an occasional plant of this with me has developed as I know it can, the majority going to growing the bulblets at the axils of the leaf instead of making bloom and stopping growth at a foot to two feet, whereas the first specimen and, by the way, the first Begonia I ever saw stood all of four feet and was a regular bush. This year I noticed the tubers showing a disposition to start growth in December and by the end of the month many have sprouts with well developed leaves. I am now encouraging these to grow along with a little heat, hoping to have them as potted plants months before the regular tuberous are out. A really finely grown Evansiana is the equal of almost any of the family.

Another possibility as a winter bloomer is Incarnata, which apparently has the usual number of aliases, one of them being Insignis. It is an erect grower with nice branching habit, medium long leaves and abundant rose-colored flowers Years ago it was grown for winter cut flowers.

The Mexican variety known at present only as Vitafolia is budding, confirming an opinion hazarded that it was of the nature of Verschafelti, it is distinctly promising, and would mix splendidly both as to foliage and bloom with the early bloomers, being white whereas our general run are pink.

Everyone is always asking for ferns and the tendency of commercial horticulture, deplored by Professor Bailey, to run to huge production of few varieties, has turned the fern business over to Nephrolepis, a family quite unfitted for general lath house work, and therefore it is a peculiar pleasure to go into the lath house and look at a border of Blechnum Occidentale, now most colorful with its pink new fronds. May I be forgiven for suggesting that the recent snappy weather with the wonderful December rains has brought out the very best in this charming border fern. It is native to a territory from Mexico to Brazil. There is a small tree species called Orientale much harder to grow but which occasionally pinks up delightfully.

Acting on the assumption that Streptocarpus are a primrose and like cool damp conditions, I have turned out all mine still in their pots, on a bench where the rain raineth and the thermometer has once touched 33. They evidently like it, the leaves are stiffer and darker green and the blooms still come now and then. By the way, a bloom picked at Christmas has kept well in a heated room for over a week. I am sure these plants could be successfully grown in the shaded part of our gardens. A large range of color is now available.

A plant or shrub rather, now acceptably in bloom is Ruellia Macrantha, it has a large flower much the shape of a Streptocarpus of a pinky purple, I won't call it magenta, is a vigorous grower and prolific bloomer. It came to me from Miss Sessions and she no doubt can add much to this brief notice.

That dainty Asparagus Crispa is now in bloom more delicate than a fern. It is deciduous or whatever you call a plant that disappears regularly to entice you to throw it away with disgust and then live to regret that action. It should be more widely grown.

It is curious to find how absurd one's conclusions about plants can be. I have put in much of the past December rushing under a glass roof the Begonias that scoffed at rain and coolth while I left in the drip of the lath house others that developed colds in the head and chilblains. President Carnot, Templini, Jessie, and Gilsoni lost many leaves and some stems but Rexes and Verschafelti laughed and Ricinafolia is growing like springtime. All the small leaved kinds have not minded in fact Fuchsioides picks up with the conditions.

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STAKING TREES

If a tree is planted very small and it is properly cared for it will require practically no staking, but most trees set out in street parking spaces and in yards do require staking because of the slender stem and height. The nursery endeavors to secure height at expense of stem to please customer at lowest price, and moreover most of our California trees are fast growers and cannot be kept in a flower pot or can growing slowly; staking therefore becomes a necessary care for the tree. It should be of redwood because it does not decay in the soil; best pointed before setting as it will not be so likely to injure the roots, and it stands more firmly. If the plant to be staked and is a real tree then a 2"x2"x10 ft. is the best stake, or if a smaller growing plant then a 1"x1"x6 or 7 ft. will be alright. Does it make any difference how the stake is placed in regard to the tree? Certainly! It is the most important detail. It should be placed on the leeward side so the tree or shrub will blow against the stake and not away from the stake. San Diego has a very light trade wind, and always from the west or northwest; during the rainy season from the south and west. If the tree is not closely tied to the stake it may rub and chafe the bark; if that happens tie a piece of burlap sacking at such points on the stake. All trees to be erect should have their branches heavier on the windward side as their weight and length will keep and hold the tree erect, and shorter on the leeward side so as to be lighter and not pull the tree over. Observing trees you will notice that generally the leaning trees have their longest limbs on the leeward side, and the straight trees have plenty of branches and a better growth on the windward side.

It is rare that a tree is properly staked. When the stake is put on the windward side of a young tree it has a tendency to prevent the best development of branches on that side and instead of being a benefit to the tree it is a serious obstruction to its proper development which should allow the tree to grow heavier to the windward side. If a plant or shrub is near a building it would be advisable to place a stake at the back so that it shows the least, and since the plant is only seen from one side it makes less difference.

Please observe and check up on these facts.

K. O. SESSIONS.

THE LATH HOUSE

(Continued from page 12)

However, a note of warning, December and January are not so trying on Begonias as the next two months.

Just as a hint let me mention in closing that four days after heavy rain I find myself obliged to water almost everything in pots and baskets.

CEDRUS DEODARA

Nearly half a century has passed since two brothers moved from Iowa to California and bought a large fruit ranch near here where they established homes and planted orchards and vineyards. The name Altadena was suggested by one of the brothers as a fitting one for the large section of land rising to the foothills of which their ranch formed a part, a veritable Eden with lofty mountains on the north and overlooking what is now the beautiful city of Pasadena.

While traveling abroad one of the brothers was enraptured with the graceful beauty of the deodar cedars of the Himalaya Mountains. They appealed to his love of the beautiful in nature and he determined to secure some of these for the California ranch land. From the seeds procured have grown the magnificent deodars, wide-spreading and high-reaching, which adorn either side of the private driveway leading through the estate. This was later turned into a public highway and called Santa Rosa Avenue, but more familiarly known as "Christmas Tree Drive."

That these are now a part of the city is due to the enterprise and confidence of these early pioneer brothers who were not to be deterred by the predictions of botanists and others who claimed that these mountain deodars could not possibly thrive in the lowlands of California.

Each year at the Christmas season the Kiwanis Club of Pasadena strings thousands of colored lights in the branches, so that no one need be without the most magnificent of Christmas trees.—Christian Science Monitor.

DECEMBER MEETING

On December 14th, 1926, the annual berry and berried wreath show was held in the Floral Building, in Balboa Park. This is one of the important meetings of the year, and was well attended.

The specimens and wreaths shown were especially interesting from the standpoint of what can be done with berried shrubs and greens other than the California Holly, which was barred this year in making Christmas wreaths.

The afternoon was thoroughly enjoyed and the Christmas Spirit prevailed throughout the meeting.

Prizes were awarded as follows:

Class I—Wreath, 18"x24", 1st prize, Miss Kate O. Sessions.

Class II—Wreath, 12"x18", 1st prize, Mrs. Turner; 2nd prize, Mrs. Greer.

Class III—Garland or Spray, 1st prize, Mrs. Turner.

Class IV—Spray or Bouquet of Berries, 1st prize, Mr. Hieatt.

A. S. HILL, Secretary.

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POISONING SNAILS

Snails prove to be such troublesome and destructive pests to our gardens that the method of poisoning them is detailed below. Very possibly there may be come readers who are still troubled with these voracious mollusks. A brief history of the discovery of the poison used and the situation leading up to it, follows:

Duing the summe of 1922 epresentatives of the State Department of Agriculture and the County Horticultural Commissioner entered upon a campaign to exterminate the so-called European white snail, Helix pisana, at La Jolla. This was the only recorded infestation in the United States. These snails could be found in countless numbers in gardens, on flowers, ornamentals, trees and buildings; on the wild growth in the canyons and undeveloped lands; on trees and palms in the parkings; on telephone poles from the ground up to the cross-arms; on rocks, under bridges, in conduits, in basements; on sidewalks and walls. Their numbers were literally unbelievable. The writer, in charge of the extermination work for San Diego County, personally counted 798 snails on one small bush a foot in diameter and 18 inches high. Every conceivable method was tried out in destroying these snails. Crews of men were employed to burn over all the infested waste land. Power machines were used to throw streams of burning oil over such places as could be handled in this manner. A laborious system of hand picking was resorted to in yards and gardens where wholesale methods of destruction obviously could not be followed. Many poisons in a large number of combinations were tried out, but all were abandoned finally except a simple, inexpensive combination of arsenate of calcium and bran. This proved so effective that it has now become the basis for practically all snail control work in California. During the process of poisoning the small white snail, the calcium arsenate-bran combination was found to be equally effective against the large brown snail which has been all too common in gardens in and around San Diego. This snail has been particularly abundant on Point Loma, at Ocean Beach, Mission Hills, Coronado and also at La Jolla, Apparently it is partial to the moist, cool atmosphere of the sections near the ocean.

To prepare the poison mix thoroughly one pound of calcium arsenate into 16 pounds of coarse bran, dry. Then moisten with only enough water to make a crumbly mash, one that will not be wet nor yet so dry that it will not hold together. Before scattering this mash sprinkle down the area to be poisoned, as this induces the snails to crawl and feed. If scattered after a rain while the ground and foliage, etc., is still wet, the effect will be the same. Scatter the material as finely as possible as large lumps are wasteful and not so attractive. Some plants may be burned if the mixture falls on them, consequently it is better to scatter it on the ground, under plants or anywhere else the snails may be crawling and feeding. To prevent drying out, scatter in the evening rather than during the day. This is also the time when the snails begin to feed. If the area poisoned is sprinkled thereafter for several consecutive evenings it will be found that all of the mash remaining will have retained its effectiveness.

R. R. McLEAN.

RAINFORD FLOWER SHOP

Cut Flowers

Floral Designs

1115 Fourth Street *San Diego*

JANUARY MEETING

A meeting of the Charter Members of the San Diego Floral Association was held in the Floral Building in Balboa Park, Tuesday, January 4th, 1927.

In calling the meeting to order, the chairman, Mrs. Greer, regretted the small attendance and stated that it probably was because so few knew of the meeting. After a few brief remarks, the chairman called on Miss Sessions for a talk.

Miss Sessions spoke of the happiness she has had in her membership in the Floral Association—the only thing in the way of a club she has ever joined. She referred to the work of the association as a great power in horticulture in the state and especially in its home town of San Diego; and believes its

influence in stimulating interest in horticultural matters is far greater than we think.

She pointed to the need of more skilled workers to do the gardening, as the housewife is not equal to the burden of home and garden and many gardens are neglected which would otherwise be places of beauty because the work is too heavy. She advocates a school of instruction to educate young men in the art of growing flowers and plants. This favored spot of Southern California is an inspiration to cultivate in the open those tender flowers and plants which in less favored spots are grown under glass.

She then went into a general talk on matters of interest to the amateur gardener, and of the fine work the Floral Association has done in the past and closed by saying that we should stand firmly back of the Association and try to do even better things in the future.

Miss Sessions was followed by Mr. Geo. W. Marston, who said that he was not sure whether he was a charter member or not, but that he probably was, because, unlike Miss Sessions, he joined nearly everything that came along.

While he has not been conspicuously active in the work of the Association, his sympathies are there; and congratulated the Association in having the Floral Build ng in Balboa Park as its home, and feels they are worthy of the privilege of a home amid such beautiful surroundings.

The influence of an organization such as the Floral Association is far reaching and is all for good; and while the beginning is encouraging and much has been accomplished, there are greater things to be done and the Floral Association should, and does, stand for all that is best in horticulture. The Association may well congratulate itself upon what has already been done, and predicted continued success for those who give much of their time to the work of making the San Diego Floral Association a factor in the growth and beautification of the city.

In response to a call from the chairman, Mr. Ernest E. White made a short talk on the work of the Association in the past, and believes that to the lover of flowers, the flower garden is a source of happiness and contributes toward contentment.

Mr. McLean then made an appeal for contributions to the California Garden and asked that those who can do so get their articles in early in the month.

The next meeting of the Association will be held on Tuesday, January 18th, in the Floral Building. The usual notices will appear in the daily newspapers.

At the close of the meeting, refreshments were served by the house committee and a generally pleasant hour was spent.

A. S. HILL, Secretary.

FREMONTIA MEXICANA

This is not difficult to raise during late spring and early summer but do not attempt it in the winter.

Soak the seed by putting in very hot water and let stand over night. Sow in pure sand covering the seed deep enough so that it does not wash out with a good watering. Cover up with a sack until germination begins. This will keep the sand moist without too much sprinkling.

Seed should germinate fom 3 to 4 weeks. Before very large place in quite small pots in a sandy mixture and plunge the pots in sand and face the tops of the pots with sand. This will prevent too quick an evaporation. The chief danger lies in overwatering. The tiny plants will need shelter and shading till well established when they can have full sunshine or just a muslin shade. In five to six weeks time transfer them to gallon cans in a sandy soil when they should make rapid growth and be fully ready by early fall to go out into permanent places, none better than warm hillside slopes. Remember at all times to give thorough drainage, light soil, no coddling but plenty of light and sunshine and prevent over watering by surfacing with sand. It is even a good thing to do this when first put out in the open ground. The writer has tried growing them from cuttings and has been quite successful in getting them calloused but all attempts failed in getting roots.

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Some of the New ones for this year: Coronna, Rose Glow, Jimmie Walker, Golden Oct, Detroit News, Mrs. R. M. Calkins, Edgar S. Kelly, Mrs. F. E. Lewis, Dorothy Borden Taylor.
Retail postpaid. Write for Descriptive Circular if interested in Mums.
W. A. WALLACE
Rt. A. Box 1095 San Fernando, Calif.

INTERESTING PLANTS

(Continued from page 9

soon became of such prime importance commercially that many attempts were made to monopolize its culture and preparation for market. These efforts led to many conflicts and considerable bloodshed, petty wars, and in one case the setting up of a sort of a little kingdom, governed in such fashion that no outsiders were allowed to enter it lest they learn the secrets of the wonderful drink and carry the knowledge to the outside world. Adventurous spirits finally dared to enter the forbidden country and were seized and kept in bondage for many years. A few escaped with their lives but with practically no knowledge of the mysterious plant, its culture and propagation."

Another peculiar plant under test in Maryland is the "sweet herb" of Paraguay. The leaves of the plant contain a material the sweetening power of which is 150 to 200 times that of cane sugar. The leaves are used in the natural state or dried and ground as required.

UP-TO-DATE CRIMSON ROSES

Although the modern taste in Roses is for those of a brlliant or startling color, everyone loves the crimsons. Not only is crimson a color that appeals to all, but it is one we associate with the "old-rose" perfume of other days. Yet we are still looking for the perfect Rose in this color. What we want is the form of a well-grown Frau Karl Druschki, the fullness of Mrs. Charles Lamplough, the foliage and freedom of flowering of the Rev. Page-Roberts, the habit of Pharisaer, the color of George Dickson, and the perfume of Prince of Wales. We may have a long time to wait before we possess a Rose with all these excellences, but we have quite a good choice of fine crimsons, which can be obtained for a modest outlay. Here are a few up-to-date varieties.

Arthur Cook.—Deep velvety crimson with rich perfume. I have had some really fine blooms, but the inner petals are short, and it is not too good a grower.

Captain Kilbee-Stuart.—A Rose with long, fine petals of brlliant vermilion coloring and possessing some fragrance. It is, however, a "poor doer," and can be recommended only as a "maiden." As such it gives fine blooms for exhibtion.

Chas. K. Douglas.—If this Rose were only fuller and richer in perfume, and the foliage immune from mildew, it would be the Rose we are looking for. The color is scarlet, flushed with bright velvety-crimson.

Chateau de Clos Vougeot.—Here we have the color we want and fragrance, but the blooms open flat like a Paeony, and the habit of growth is very irregular. With me it is fairly vigorous, but many tell me they cannot get even moderate growth. It is one of the darkest crimson Roses raised, and the color remains constant in all weather until the petals drop.

Covent Garden.—A rich deep crimson of good form, best in autumn. A vigorous grower and free, but the foliage is often anything but a nice shade of green, and the blooms possess little or no perfume.

Colonel Oswald Fitzgerald.—Most blooms of this variety come perfect, but they are almost devoid of perfume. It is not a strong grower with me; the foliage is not too plentiful and falls early. I hear it does well in Scotland and the North, and it is worth a trial. Color is blood-red crimson.

Courage.—A deep, glowing, velvety crimson, the blooms are fragrant, full, and of good form. The growth, however, is stumpy, and too many buds come on the short stems. Only to be recommended for exhibition and as a dwarf bedder. Foliage slightly addicted to mildew.

Earl Beatty.—A deep crimson and fragrant. Last autumn I had some good blooms of this variety, and this year it has given good promise. It has a nice habit of growth. I have formed a rather good opinion of this Rose, but it is early days to speak too decidedly as to its merits.

Earl Haig.—A Rose of sturdy, upright habit, the stiff stems carrying large, full blooms of good shape, deep reddish-crimson in color, moderately fragrant. A good exhibition Rose.—B. W. Price, in Popular Gardening.

COMPLETE FILES FOR SALE

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